

Claims:

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1. Method for transporting a thin nonwoven material such as a nonwoven staple fiber material from one roller to a second transport device, characterized in that the nonwoven material is seized by air pressure, such as a partial vacuum, which acts against a transport element and is held by this partial vacuum on the transport element during the transfer as well as during delivery.

2. Method according to Claim 1, characterized in that the partial vacuum acts against an endless circulating transport element.

Method according to Claim 1 or Claim 2, characterized in that, during delivery, the nonwoven material is simultaneously processed and cooled at the intrinsic temperature of the nonwoven material.

4. Method according to Claim 3, characterized in that the nonwoven material is permeated by cooling air during delivery.

5. Device for delivering a thin, unbonded nonwoven material such as a nonwoven staple fiber material from one roller to a following adjacent roller which may be encircled by an endless conveyor for further transport, characterized in that the device includes an endless circulating transport element (18, 19) against which a partial vacuum (25, 26) acts from the non-transporting side.

6. Device according to Claim 5, characterized in that the transport element is designed as an endless conveyor (18) with an associated suction device (24).

7. Device according to Claim 5, characterized in that the transport element is designed as a perforated drum (19) subjected to a suction draft and supplied, as required, with cooling air (26).

8. Device according to one of the foregoing claims including a calendar roller pair followed by an endless conveyor provided for further processing, characterized in that an additional permeable endless delivery conveyor (18) extends above the nonwoven track, approximately from the roller nip up to and beyond the following endless conveyor (17), to which endless delivery conveyor is associated a suction device (24) running parallel to the conveyor (18) and located above the nontransport side.

9. Device according to Claim 8, characterized in that the first deflection roller (20) of the calendar roller nip for the endless delivery conveyor (18) is engaged in the nip between the calendar rollers such that the lower calendar roller partially encircles the nonwoven material (21).

10. Device according to one of the foregoing claims, characterized in that a suction device (23) to receive the nonwoven material from the endless delivery conveyor (18) is located at the upper delivery site of the nonwoven material (21) extending from the endless delivery conveyor (18) to the following endless conveyor (17) below said endless conveyor.

11. Device according to one of the foregoing claims including a calendar roller pair followed by an endless conveyor for further processing, characterized in that a counter-rotating perforated drum (19) is associated with the lower roller of the calendar roller pair (5), in which drum a partial vacuum is generated.

12. Device according to Claim 11, characterized in that cooling air in the form of ambient air (26) is fed to the perforated drum (19).

13. Device according to Claim 12 including a perforated drum with an inner cover, characterized in that the inner cover (27) on the top side of the perforated drum (19) extends more than 180° and ends directly above the delivery line at the calendar roller and directly above the delivery line at the first deflection roller of the endless conveyor (17).

